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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/597,197

07/14/2006

Hirokazu Kugai

20239/0204124-US0

7606

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06/10/2009

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EXAMINER

LE, HOA T

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

06/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/597,197	Applicant(s) KUGAI ET AL.	
	Examiner H. (Holly) T. Le	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>July 2006 & Nov. 2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsuchida et al (US 4,497,722 or JP 60-13826 ("JP'826")) in view of Shinji et al (JP 10-335128).*

Examiner's Note: Because the Tsuchida patent (US'722) is an English Equivalent of JP'826, the citations in this rejection are based only on the US'722 patent and applied to both US'722 and JP'826.

Claim 1: Tsuchida teaches a magnet powder comprising a plurality of composite magnetic particles wherein each of the composite magnetic particle comprises a metal magnetic particle, and an insulating coating of phosphorus-containing compound covering the surface of the metal magnetic particle. See Tsuchida, col. 2, lines 17-55. Tsuchida further teaches an outer coating of an organopolysiloxane compound covering the surface of the insulating coating (Tsuchida, col. 7, lines 39-52). However, Tsuchida does not teach particulate dispersant of metal oxide. Shinji teaches adding titania or zirconia as dispersed particles to a ferromagnetic composite powder. See Shinji,

* Japanese documents have been cited and provided by Applicant.

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abstract. It would have been obvious to apply the metal oxide dispersed particles taught by Shinji to the composite magnetic powder of Tsuchida because Shinji states that such dispersant enhance mechanical strength of ferromagnetic metal powder with high magnetic flux density, low coercive force and low loss. See Shinji, abstract. With regard to the relationship between the diameter of the dispersed particles and the thickness of the coating layers, Shinji's powder shows dispersed particles of diameter 62 nm for zirconia and 5-50 nm for titania (SHINJI, Example 1) while Tsuchida suggests a composite particle having a diameter up to 10 μm (TSUCHIDA, col. 4, lines 3-5); therefore, the overall coating thickness on the core particle cannot be more than 10 μm . Thus, the relationship of the coating layers and the diameter of the dispersed particles falls within the claimed relationship.

Claim 2: The insulating coating taught by Tsuchida is phosphorus-coating material (Tsuchida, col. 2, lines 17-55).

Claim 3: The dispersed particles include titania and zirconia (Shinji, abstract).

Claims 4-5: Tsuchida discloses that the content of phosphorus-containing compound as the insulating coating is 0.01-5 wt% (Tsuchida, col. 4, lines 60-67); and the content of the silicon-coating compound present in the coating is 0.02 to 2 wt% of the magnet powder. Therefore, the resulting thickness of the coating is expected to be within the claimed range. In addition, the thickness of the coatings as claimed would have been obvious through routine experimentation.

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Claim 6: The magnet powder is formed by molding a mixture of magnetic composite particles and heat-treating the molded powder at 400-700°C. See Shinji, paragraph [0011] (step 7) and paragraph [0029].

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. (Holly) T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 12:30 a.m. to 9:00 p.m. (EST), Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. (Holly) T. Le/
Primary Examiner, Art Unit 1794

June 7, 2009

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